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1988 MANAGEMENT PLAN  
SOUTHEAST ALASKA AND YAKUTAT TROLL FISHERY

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<sup>1</sup> The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate needs for up-to-date information, reports in this series may contain preliminary data.

## SOUTHEAST ALASKA-YAKUTAT TROLL FISHERY

### 1988 MANAGEMENT PLAN

This plan provides an overview of the approach that will be used to manage the 1988 Southeast Alaska commercial troll salmon fishery. The management approach outlined here may need to be refined and modified during the season as information on run strength and fishery performance becomes available. However, the current plan should assist fishermen and processors in general pre-season planning. A special summary of 1988 regulations entitled "1988 Alaska Salmon Troll Regulation Guide" and the 1988 Finfish Regulation Booklet are also available at local Fish and Game offices to provide fishermen with detailed information on specific regulations.

The general dates for the 1988 trolling season are as follows:

1. Winter Season: October 1, 1987 through April 14, 1988.
2. Experimental Fisheries: June 6 through June 29.
3. Summer Season: July 1 through September 20.
  - A. Chinook salmon season closes when established harvest ceiling reached.
  - B. Probable 10-day regionwide closure August 8 through 17.
  - C. Inseason regulations as needed for conservation.

### MANAGEMENT SYSTEM

The commercial troll fishery in the Southeast Alaska Region, occurs in waters under both state and federal jurisdiction east of the longitude of Cape Suckling. All other waters of Alaska, including the Economic Exclusive Zone (EEZ) west of Cape Suckling, are closed to commercial salmon trolling.

The Alaska Board of Fisheries promulgates fishing regulations for State waters, while the Secretary of Commerce is the federal counterpart for fishing activities in the EEZ. The Board of Fisheries and the North Pacific Fishery Management Council coordinate state and federal regulations to ensure that compatible management measures are employed to the greatest extent possible.

Although less than 10 percent of the troll chinook and coho salmon catch is normally reported from outer coastal areas beyond three miles of the surfline, which constitutes the federal EEZ waters, coordination of state and

federal regulations is required to minimize confusion for trollers fishing both areas.

An annual, all-gear chinook catch ceiling is established by the U.S./Canada Pacific Salmon Commission as part of a coastwide natural chinook stock rebuilding program. Allocation of the allowable all-gear chinook catch between gear types is determined by the Board of Fisheries.

Management of Alaska's commercial fisheries is based on policies and regulations promulgated by the Board of Fisheries. Authority to issue in-season emergency orders to adjust fishing seasons and areas as required to achieve conservation objectives is delegated through the Commissioner of the Alaska Department of Fish and Game (ADF&G) to department fisheries management biologists. This provides the necessary flexibility to regulate fisheries in response to in-season assessment of resource availability. A similar system exists in the federal management agency, where the National Marine Fisheries Service has authority to institute in-season regulatory changes.

The widespread and complex nature of the troll fishery necessitates a closely coordinated management program. Inseason management is accomplished through a team approach led by the Southeast Regional Management Biologist and includes a Region Troll Fishery Management Biologist, five Area Management Biologists, and a Regional Biometrician. Names and work locations of people to contact concerning commercial troll fishery management are listed at the end of this management plan.

## SALMON STOCKS

The Southeast Alaska commercial troll fishery targets primarily on chinook and coho salmon. While limited directed trolling occurs for pink salmon in certain localized areas, pink, chum and sockeye salmon are normally considered incidental to the taking of the two primary target species and will not be addressed in this plan. The troll fishery normally accounts for 80%-90% of the chinook salmon and 50%-75% of the coho salmon taken in Southeast Alaska Region fisheries.

### *Chinook Salmon*

Native chinook salmon stocks occur throughout Southeast Alaska and Yakutat rivers. Chinook salmon spawn primarily in large mainland rivers and their tributaries, the most important of which are the Alsek, Taku, Stikine, (the transboundary rivers) and the Behm Canal rivers. In total, 34 systems in the region are known to produce runs of chinook salmon. The stocks are nearly all "spring type", in that mature adults enter spawning streams during the spring and early summer months and after emergence the following spring, juveniles rear in freshwater one complete year before their seaward migration.

Several age classes of mature spawners and immature chinook salmon are harvested by trollers during any one fishing season. A minimum size limit of 28 inches (measured from tip of snout to tip of tail) applies to chinook salmon harvested by troll gear.

The long term management approach for Southeast Alaska and transboundary river chinook salmon stocks includes a 15-year stock rebuilding program begun in 1981. In addition, a 15-year coastwide natural chinook stock rebuilding program, initiated in 1985 under the Pacific Salmon Treaty is expected to improve the status of many non-Alaskan chinook stocks which contribute to Southeast Alaska fisheries.

Current information indicates that a majority of the chinook presently harvested in the Alaska troll fishery are produced from spawning streams and hatcheries in Canada and the Pacific Northwest. Management of these stocks is coordinated on a coastwide basis through the Pacific Salmon Commission.

Chinook salmon escapements to most Southeast Alaska and transboundary river systems have increased substantially since the rebuilding program for these stocks was initiated in 1981. This has been primarily the result of regionwide, spring and early summer trolling closures since 1981, and continuation of extensive troll, net and sport fishery restrictions implemented during the mid-1970's in inside waters and terminal areas. Shortened troll chinook seasons resulting from catch ceilings imposed since 1985 under the Pacific Salmon Treaty for coastwide natural chinook stock rebuilding have further reduced troll harvest of Southeast Alaska and transboundary river chinook stocks. Spawning escapements to indicator chinook stocks in Behm Canal in the southern portions of the region have met management goals during the past several years. However, rebuilding progress for chinook stocks in the central and northern portions of the region has been more variable.

Production of chinook salmon by Southeast Alaska hatcheries was relatively small prior to the mid-1980's but is now contributing significantly to Southeast Alaska fisheries. The projected 1988 Alaskan hatchery contribution to common property, mixed stock fisheries is 36,000 fish. Future hatchery production is expected to increase substantially.

### *Coho Salmon*

Most coho salmon harvested in the troll fishery are of Alaskan origin. Coho salmon occur in approximately 2,000 anadromous fish streams in the Southeast Alaska Region and spawn during the fall and early winter months. Most coho salmon harvested by trollers are harvested in the year of spawning. There is no minimum size limit for coho salmon.

Coho salmon stocks, which were depressed in the mid to late 1970's have improved since then in response to more favorable environmental conditions and more restrictive management. Coho returns during 1982-87 have been especially strong resulting in near record harvest levels. Hatchery coho

production, which has increased rapidly in recent years, contributed an estimated 250,000 coho to common property fisheries in 1987. (This was down from approximately 400,000 in 1986.)

Although overall coho returns to Southeast Alaska have increased in recent years, coho escapements to some index systems have been quite variable, particularly during the past two years. While information on status of specific coho stocks is limited, recent escapement patterns have raised some concerns for potential coho conservation problems. Coho returns and inseason indicators of coho escapements are being monitored more closely to determine if additional conservation actions are required.

### CHINOOK SALMON MANAGEMENT

New management and regulatory approaches have been required for the troll fishery in recent years in response to (1) implementation of a rebuilding program for Southeast Alaska chinook stocks; (2) implementation of the Pacific Salmon Treaty including establishment of annual chinook catch ceilings as part of a coastwide natural stock rebuilding program; and (3) increased production and availability of Alaska hatchery chinook salmon. General chinook management goals for the Southeast Alaska troll fishery include:

1. Achieve the chinook salmon harvest allowable under the Pacific Salmon Treaty.
2. Manage for other Treaty provisions including allowance for Alaska hatchery add-on and minimization of incidental chinook mortalities.
3. Provide for maximum allowable harvest of Alaska hatchery chinook salmon.
4. Continue the Southeast Alaska natural chinook stock rebuilding program.

#### *1988 Chinook Guideline Harvest Level*

The Alaska Board of Fisheries and the North Pacific Fisheries Management Council, in compliance with stipulations of the Pacific Salmon Commission, have established a total commercial and recreational, all gear base catch ceiling of 263,000 chinook for the 1988 season. The pre-season projection for the 1988 Alaska hatchery add-on, provided for by the Treaty, is 27,000 chinook salmon. This yields a total 1988 projected all-gear catch ceiling of 290,000 chinook salmon.

For purposes of catch accounting, the 1988 season extends from October 1, 1987 through September 30, 1988. This includes both the winter and summer trolling seasons. The 1988 winter season is completed and this management plan addresses the summer trolling season.

The following catch projections are used for pre-season planning purposes to project the number of chinook salmon available for troll harvest during the 1988 summer season:

1. Total commercial and recreational fishery catch projections:

Fishery	<u>Total Chinook Catches in Thousands</u>		
	Base Ceiling	Hatchery Add-on	Total
Troll	221	19 (70%)	240
Net	20	3 (10%)	23
Recreational	22	5 (20%)	27
All Gear	263	27 (100%)	290

2. Total troll fishery catch projections:

Fishery	<u>Troll Chinook Catches in Thousands</u>	
	(Base Plus Hatchery Add-on)	
Winter Fishery	65	
June Experimental	5	
Summer Season	170	
Total Troll	240	

An explanation of the above information is as follows:

1. Winter troll Chinook Salmon Catch.

As indicated above, the chinook salmon catch in both the winter and summer seasons is included in the tabulation of the harvest ceiling. Preliminary landing information indicates that approximately 65,000 chinook salmon were taken during the 1988 winter trolling season, which extended from October 1, 1987 to April 14, 1988.

2. Chinook Salmon Hatchery Add-on.

In addition to the base catch ceiling of 263,000, harvest of Southeast Alaska hatchery produced chinook above the 1984 level (approximately 5,000 fish) is allowed under terms of the Treaty. The preseason projection for the 1988 hatchery add-on is approximately 27,000 chinook salmon. This would increase the total all gear catch ceiling to 290,000 chinook salmon. The preseason projection for the hatchery add-on is calculated as follows:

Add-on = (Total hatchery harvest) minus ("Old" or 1984 hatchery harvest)  
          minus (Risk adjustment for potential estimation error)  
          = 36,000 - 5,000 = 4,000  
          = 27,000

The actual hatchery add-on allowed in 1988 will be determined in-season from estimated catches of Southeast Alaska hatchery chinook based on coded wire tag recoveries. The projected hatchery add-ons by fishery are based on approximate proportions of hatchery harvest by gear type observed during the past several years; there are no established target levels. Most Alaska hatchery chinook are harvested incidentally during the normal conduct of fisheries targeting on other chinook stocks or species of salmon.

3. Net Fishery Chinook Salmon Catch.

The board has established a harvest limit of 20,000 chinook salmon, excluding Alaska hatchery chinook, for Southeast Alaska net fisheries, and has directed the Department to implement regulations as required to maintain the catch within this limit. Trollers are encouraged to review the net fishery (purse seine, drift gill net and set gill net) management plans for more details.

4. Recreational Fishery Chinook Salmon Catch

The Board has not established a guideline harvest level for recreational fisheries since recreational chinook catches have remained relatively constant during recent years. Based on recent average levels, a recreational catch of 22,000 chinook salmon, excluding Alaska hatchery chinook, is projected for 1988.

5. June Experimental Troll fisheries

The Board authorized several experimental troll fisheries (discussed below) prior to the opening of general summer trolling season. A catch of approximately 5,000 chinook salmon is projected for these fisheries.

6. Troll Fisheries Chinook Salmon Catch

The projected troll portion of the established harvest ceiling plus the projected troll portion of hatchery add-on is 240,000 chinook salmon. Subtracting an estimated catch of 65,000 fish during the winter trolling



season and 5,000 fish harvested during the June experimental fisheries results in a projected summer troll fishery harvest of 170,000 chinook salmon. Updated winter troll and June experimental fishery catches will be used to determine the actual allowable chinook harvest prior to the summer troll fishery.

### *Summer Troll Chinook Salmon Season*

Primary in-season management objectives for the 1988 summer troll chinook salmon season include the following:

1. Allow harvest of the established chinook salmon catch limit, including the base catch ceiling and new Southeast Alaska hatchery harvest.
2. Allow full utilization of coho salmon runs, while meeting conservation requirements and board-directed catch allocation objectives.
3. Minimize incidental hook and release mortalities of chinook salmon during chinook closures which occur after the chinook salmon catch limit is achieved.

Beginning July 1, trolling will be open regionwide for the harvest of all salmon species. The fishery will remain open for chinook salmon until inseason catch projections indicate the allowable chinook catch has been taken. If 1988 catch rates are similar to 1987, it is expected that the chinook fishery will extend to approximately July 19. If 1988 catch rates are higher, it may be necessary to close the fishery for chinook earlier than July 19. If catch rates are lower, the chinook fishery will be extended accordingly.

At the time of the chinook closure, if trolling remains open to fishing for other species, fishermen will be required to offload all chinook salmon they have on board prior to fishing for coho salmon or other non-chinook species. They will also be required to release all chinook salmon incidentally hooked while targeting on other species. Trollers are encouraged to avoid areas of high chinook abundance and to utilize fishing techniques which minimize incidental hooking of chinook salmon. During the chinook only closure, the Department also expects to close trolling areas of high chinook abundance which have been closed in the past to help minimize incidental hooking and release of chinook salmon.

### *Chilkat Inlet Closure*

The summer season opening for the waters of Chilkat Inlet will be delayed from July 1 until July 17. This is needed to provide additional protection for mature chinook salmon returning to spawn in the Chilkat River drainage. The troll closure corresponds to a similar closure for the drift gill net fishery and includes all waters of Chilkat Inlet north of the latitude of

Seduction Point. Restrictions are also being implemented in the sport fishery to conserve Chilkat River chinook salmon.

### *June Experimental Fisheries*

The Board has authorized the department to conduct limited experimental troll fisheries in June prior to the opening of general summer season on July 1. These fisheries are intended to allow evaluation of harvest opportunities for mature chinook salmon returning to the Crystal Lake, Little Port Walter, Medvejie and Whitman/Neets Bay hatcheries. Additionally, experimental trolling opportunities, for harvesting chum and pink salmon, were provided in portions of Cross Sound.

The experimental troll fisheries will be conducted as follows:

1. Salmon may only be taken under the authority of a permit issued by the department. The permit may specify landing requirements to have fish sampled for the presence of coded wire tagged chinook salmon. The permits may be obtained from the Division of Commercial Fisheries Offices located in Douglas, Haines, Sitka, Petersburg, Wrangell and Ketchikan during normal working hours. The permit stipulations will allow the department to monitor catch levels and ensure sampling of the landed catch.
2. All legal salmon may be retained except coho salmon may not be retained until June 15.
3. The general season is from June 6 through 29, with open periods as indicated below for each specific location:

Carroll Inlet ( chinook hatchery release site ): The waters of Carroll Inlet north of the latitude of California Head and south of the latitude of Nigelius Point will be open for a continuous fishing period from June 6 through June 29.

Neets Bay and Whitman Lake Hatcheries: The waters of District 2 will be open within one nautical mile of the shore of the Cleveland Peninsula north of the latitude of Niblack Point and south of the latitude of Lemesurier Point Monday and Tuesday each week from June 6 through 28. The waters in Section 1-F north of a line from Cone Point to Harbour Point to Hid Reef light and then due west to the District 2 boundary will be open Monday and Tuesday each week from June 6 through 28 except as follows:

- The waters of George Inlet will be closed north of the latitude of California Head.
- The waters of Tongass Narrows will be closed north of a line from Mountain Point Light to Gravina Point.

- The waters of Vallenar Bay and contiguous portions of Section 1-F will be closed north of the latitude of South Vallenar Point.
- The waters of Carroll Inlet will be open as indicated above.

The waters of Section 1-E within one nautical mile of the shore of the shore of Revillagigedo Island south of the latitude of Brow point and north of the latitude of Indian Point may be open by emergency order if the availability of Neets Bay hatchery produced chinook salmon is demonstrated to be high.

Crystal Lake Hatchery: The waters of Wrangell Narrows, in Section 6-A, south of 56°46' north latitude and north of line from North Point to Spruce Point will be open for continuous fishing from June 6 through 29. The waters of Frederick Sound, in District 10, within 2 nautical miles of the shore of Kupreanof Island west of the longitude of Boulder Point will be open for a one day period on June 6. The duration of subsequent fishing periods will be established by emergency order depending on the observed catch and presence of Alaska hatchery chinook salmon.

Little Port Walter Hatchery: The waters of Section 9-A south of the latitude of Patterson Point and north of the latitude of Graveyard Point (located at 56°15'50" north latitude), including all waters of Patterson Bay, Deep Cove, Port Herbert, Port Walter, Port Lucy and Port Conclusion, will be open Monday and Tuesday each week from June 6 through 28.

Medvejie Creek Hatchery: The waters of Silver Bay, in Section 13-B, east of a line from entry point to a point at 57°01'43" north latitude, 135°14'17" west longitude will be open Monday and Tuesday each week from June 6 through 28 except the waters of Bear Cove will be closed east 135°09'42' west longitude.

Cross Sound (hatchery chum and pink salmon harvest area): The Waters of Section 14-A west of the longitude of Point Dundas, south of the latitude of Point Dundas, and east of a line from the southern end of Taylor Island to George Island Light to Point Lavinia will be open Monday, Tuesday and Wednesday each week from June 13 through 29.

4. Each fishery will close by emergency order when the harvest in that fishery of legal size chinook salmon, excluding Alaskan hatchery chinook, reaches 1,000 fish, except as follows;
  - If the catch of Alaskan hatchery chinook salmon is 33 % or more of the total chinook salmon catch in a specific area, the catch limit for that area will be increased to 2,000 fish, excluding Alaskan hatchery chinook.
  - For the Neets Bay Hatchery and Whitman Lake Hatchery separate catch limits will apply to the combined waters of the Revillagigedo Channel-Nichols Passage areas and the Gravina Island shore-Ship Island shore areas.

- The catch limit for the fishery in Section 14-A is 500 chinook salmon.
- 5. Each CFEC permit holder must check with a local representative of the Department before departing the Section 9-A experimental fishing area to arrange to have their catch sampled; the sampling may include the removal of the upper jaw of adipose fin clipped fish.
- 6. The open areas and duration of weekly open periods may be adjusted by emergency order to ensure the catch limits are maintained.
- 7. Each of the hatcheries near the experimental fishing areas is anticipating returns of mature chinook salmon in excess of brood stock needs which may be available for harvest. If it is determined that brood stock needs are not being obtained the fisheries will be limited.

#### COHO SALMON MANAGEMENT

By regulation, the troll coho salmon season normally extends from June 15 through September 20 although the major portion of the catch generally occurs from early July through early September. Because of the structuring of the 1988 chinook salmon season, the general coho fishery will not begin until July 1. However, coho may be retained in the June experimental fisheries beginning June 15.

Southeastern Alaska Region coho salmon fisheries are managed on assessed in-season run strength, and are regulated to achieve conservation objectives and Board of Fisheries established allocation policies. The coho salmon fishery is not managed under a total harvest guideline, as is the chinook salmon fishery.

Troll coho salmon catches, the majority of which occurs in outer coastal areas, generally peak sometime during mid-July to mid-August, while catches in inside gillnet fisheries peak near mid-September. Migrations into spawning streams peak between late September and mid-October.

Since most coho spawning escapement information is not available until after the fishing season, inseason management is based on fishery performance information. Coho catch rates in the outside troll fishery provide information on overall coho salmon run strength. However, landings in the outside troll fisheries do not provide a good measure of eventual spawning escapements to specific areas. Coho salmon catch rates in inside troll, gill net and some recreational fisheries are used to provide information concerning movement of coho salmon to inside areas, and as general indicators of escapements to some mainland spawning streams.

## *Ten-Day Troll Closure*

Increased effort in outer coastal areas by the troll fishery during the 1970's resulted in inside troll, net and recreational fisheries receiving reduced opportunities for coho salmon harvests. To address both conservation and allocation problems, the Board has, since 1980, made provisions for a ten-day regionwide closure during the coho salmon season if necessary to help move more coho salmon into inside areas. Such closures have been implemented each year since 1980.

For the 1988 season, a ten-day closure of the troll fishery can be expected during mid-August. The most desirable time period for the closure is approximately August 8 through August 17. This closure can be expected to occur unless unusual conditions reduce the effectiveness of the troll fleet in outside coastal fishing areas. Since the troll fishery targets primarily on coho salmon in mid-August, the ten-day closure will apply to trolling for all species of salmon, as it has since 1980. Dates of this closure may vary depending on coho salmon run strength and timing, or the need to coordinate with any chinook closures required due to early achievement of the chinook guideline harvest level. Specific dates of the 10-day closure will be announced by emergency order.

Criteria used to determine whether a ten-day closure will be implemented during the 1988 season are those established by the Board at its December 1985 meeting. The closure will be implemented if either of the following conditions are met:

1. The Department determines that numbers of coho salmon reaching inside areas may be inadequate to provide for spawning requirements, given normal or even restricted inside fisheries on coho salmon and other species. The primary abundance indicators for this assessment consist of relative harvest levels by all fisheries and, in particular, catch per unit of effort in inside drift gillnet and sport fisheries compared to average 1971-80 levels.
2. The Department determines that the proportional share of coho salmon harvest by the troll fishery is larger than that of inside gillnet and recreational fisheries compared to 1971-80 levels. Primary inside fishery indications for this assessment are overall coho salmon harvests and catch per unit of effort in the Tree Point, Prince of Wales, Taku/Snettisham, and the Lynn Canal drift gillnet fisheries and the Juneau marine sport fishery.

Following implementation of a ten-day closure, if required, assessment of coho salmon run strength will continue and additional area or regionwide troll fishery closures will be implemented as needed to ensure conservation of coho stocks.